



ALGEBRA SEMINAR

Some semisimple categories on the class of finite groups.

By

Laurence Barker
(Bilkent)

Abstract: The functorial representation theory of finite groups is an approach whereby, when studying some kind of representation, such as permutation sets or $\mathbb{F}G$ -permutation modules, we can capture all the representations and all finite groups together within a single module of a suitable algebra. Such an algebra is equipped with a complete set of mutually orthogonal idempotents which, logical quibble aside, is in a bijection with the class of finite groups. The approach is called functorial because it can be expressed in category theoretic terms. We shall be reviewing some cases where the module theory is straightforward because the algebras are direct sums of full matrix algebras. Or, to put it hegemonically, the functor theory is straightforward because the categories are semisimple.

Date: Wednesday, February 28, 2024

Time: 13:30

Place: SA141